

GMT 1. NBC PASSIVE DEFENSE

LESSON TITLE:	NBC Passive Defense Class
DATE PREPARED:	October 1997. Prepared by HM1 (FMF) Torres
TIME:	1 Hour
METHOD:	Lecture/Demonstration
LOCATION:	Classroom/Field Environment
INSTRUCTORS REQUIRED:	One
REFERENCES:	OPNAV P-86-1-95, U.S. Navy CBR Defense/U.S. Marine Corps NBC Defense Handbook. Marine Battle Skills Training Handbook.
TRAINING AIDS:	Simulated Mass Casualty Exercises (hands on tng)

PREFACE

The post Cold War era and advent of weapons of mass destruction have prompted a change in focus and priorities with respect to our Naval Forces' ability to carry out sustained operations in high threat areas or contaminated environments. As the number of third world countries possessing chemical, biological and nuclear weapons increases, the need for Sailors and Marines to more clearly understand and be better prepared to deal effectively with a broad range of defensive measures remains a top priority.

MEDICAL REPRESENTATIVE RESPONSIBILITIES

The primary responsibilities of the medical representative are to:

1. Treat casualties.
2. Organize battle dressing station personnel.
3. Furnish medical supplies to first aid boxes and battle dressing stations.
4. Conduct shipwide training in self-aid, first aid and the medical aspects and treatment priority (triage) of CBR casualties.
5. Organize and maintain a walking blood bank.

6. Obtain samples/specimens to detect the possibility of biological attack; advise and assist the DCA in decontamination of biological agents.
7. Be a member of the damage control training team (DCTT) primarily to perform training and evaluation on stretcher bearers, first aid and triage.
8. Instruct the ship's personnel in radiation and CW/BW hazards including maintenance of radiation exposure log.
9. Inspect food and water supplies following an attack.
10. Immediately report any unusual disease/infection.
11. Keep abreast of medical developments in CBR-D and advise the CO and DCA of such.
12. Train/qualify adequate numbers of personnel and assign them to decontamination stations.
13. Maintain and distribute CBR antidotes in coordination with DCA.

DETECTION, IDENTIFICATION AND REPORTING

The very nature of chemical, biological and radiological (CBR) agents makes detection and identification difficult. The blast and heat of an exploding nuclear bomb can be seen, heard and felt, but nuclear radiation cannot be detected by any of the five senses. Similarly, most chemical and biological warfare (CW/BW) agents can exist yet remain undetected because of their lack of color and odor. (Although some chemical agents do have a characteristic color and odor, recent scientific developments have made it possible to eliminate these distinguishing characteristic.) CBR agents that cannot be identified by senses, however, can be detected by mechanical, chemical and electronic means now available or under development.

The ability to detect and identify CBR agents is enhanced when accompanied by prior intelligence reports. Strategic intelligence can provide estimates of an enemy's capabilities, limitations and probable intentions, including evaluation of an enemy's protective equipment and its availability. Medical intelligence can provide information concerning the enemy's capability to treat casualties or the extent of an immunization program.

INDIVIDUAL PROTECTIVE MEASURES METHODS AND TECHNIQUES

1. The NATO marker for biological contamination is a Blue Triangle with red 2 inch lettering that reads "BIO" , name of agent (if known), date and time of detection.
2. The NATO marker for chemical contamination is a Yellow Triangle with 2 inch lettering that reads "GAS", name of agent (if known), date and time of detection.
3. The NATO marker for a nuclear contamination is a White Triangle with black 2 inch lettering that reads "ATOM", dose, rate, date and time of reading, date and time of burst (if known).
4. The NATO marker for a chemical minefield is a Red Triangle with yellow 2 inch lettering that reads "GAS MINES", date of emplacement.
5. There are six levels of Mission Oriented Protective Posture Gear.
6. In MOPP 0 the mask, overgarment, overboots, and gloves carried or readily available.
7. In MOPP I the overgarment is worn open or closed based on temperature; overboots, mask/hood, and gloves are carried.
8. In MOPP II the overgarment is worn open or closed based on temperature; overboots mask/hood, and gloves are carried.
9. In MOPP III the overgarment is worn open or closed based on temperature; overboots and mask/hood are worn; gloves are carried.
10. In MOPP IV the overgarment worn closed , overboots worn, mask/hood worn, gloves worn.
11. Procedures for drinking water from the canteen while masked, using the M1 canteen cap:

Remove drinking tube from the holder/sleeve on front of mask, open top of M1 canteen cap and fully insert the quick-connect coupling into the cap. Place internal drinking tube in mouth. Without breaking the seal, invert the canteen and blow into the internal drinking tube. Water should enter the mouth. To stop, without breaking the seal, turn the canteen right side up, disconnect the coupling and return drinking tube to holder/sleeve.

12. Immediate action for chemical spray attack:

Stop breathing, don, clear, and check Field Protective Mask, sound alarm, crouch covering self and equipment, or seek cover. Watch avenues of approach, and continue the mission.

13. Symptoms of nerve agent poisoning:

Dimness of vision, drooling, localized muscular jerking and twitching, pinpointed pupils, and

excessive sweating.

14. Antidote for nerve agent poisoning and its use:

NAAK MARK I Kit. Remove Atropine (small injector) from safety clip, inject in upper outer quarter of buttocks or thigh, hold in place for ten seconds. Follow immediately with a 2 PAM CHLORIDE (large injector) using same procedures. Monitor casualty for 10 minutes if symptoms persist, repeat procedures with a second NAAK MARK I Kit and monitor for and additional 10 minutes. If symptoms still persist, administer the third and final NAAK MARK I Kit.

15. The CANA is a Diazepam injector used by individuals after 3 NAAK MARK I Kits have been administered. It is administered by: removing the safety cap, injecting into the upper outer quarter of the buttocks or thigh, and holding in place for ten seconds before removing.

16. After the NAAK MARK I Kit injector has been administered to a casualty: bend the needles and place on the label of the pocket, so others can see how many injections have been given.

17. Symptoms and treatment for blood agent poisoning:

Headache, vertigo, nausea, tightness in the chest, and coughing; irritation of the eyes, nose, and throat. Increase or decrease in breathing rate, persistent cough with much frothy sputum. Discoloration of the lips and fingertips (red or black). Convulsions in 20-30 seconds and coma. Immediately mask the casualty, treat for shock, and Medevac the casualty as soon as possible to a medical treatment facility for definitive treatment.

18. Symptoms and treatment for a blister agent casualty:

For mild exposure: Nausea, dizziness, itching or tingling of the skin, vomiting, cramps, diarrhea, reddening of the skin. For moderate exposure: Immediate and intense pain, particularly in the eyes and respiratory tract. Inflammation, blisters, and coughing up blood. Shock can cause dry land drowning. Mask the casualty and dress the casualty out to MOPP IV, treat for shock, and Medevac as soon as possible.

19. Symptoms and treatment for choking agent poisoning:

For mild exposure: Headaches, nausea, tightness in the chest, tears/watery eyes, dry throat, and vomiting. For moderate exposure: Hacking cough, rapid shallow breathing, red/pink sputum, shock. Mask the casualty, treat for shock, and Medevac as soon as possible. Also, monitor the casualty to ensure the airway does not get blocked.

20. The M9 tape is placed on the individual to detect the presence of liquid chemical contamination. Upon contact with a liquid agent the tape will change color (red splotches).

21. Signals/alarms and verbal warnings for a NBC attack.

Visual: (hand and arm), percussion device, siren blast, and electronic warning system (field radio and telephones).

Verbal: "GAS, GAS, GAS", "SPRAY, SPRAY, SPRAY".

22. Procedure for resuscitating a casualty in a NBC environment in MOPP gear:

Back pressure arm lift method: Place the casualty on the stomach, place hands under the chin and turn the head slightly. Position yourself at the head of the casualty, bending at the waist, place palms on shoulder blades with the fingers toward victims feet. Press straight down firmly to depress lungs, grasp victims triceps area and lift up and forward to expand the lungs Repeat 10 to 15 times per minute until the casualty is breathing again or until told to stop.

23. Action to be taken for a nuclear attack without warning carrying a weapon:

Immediately drop to the ground, face down and close your eyes. If cover is available, use it. Protect or cover exposed skin by putting the hands and arms under or near the body, keeping the helmet on. Ensure that the weapon is placed under your body or beside you with the strap/sling wrapped tightly around your arm. Keep your head down and remain down for 90 seconds or until debris has stopped falling.

24. Action to be taken for a nuclear attack without warning without a weapon.

Immediately drop face down, feet toward the blast (if possible), and close your eyes. If cover is available, use it. Protect or cover exposed skin by putting hands and arms under or near the body and keeping your helmet on. Remain down for 90 seconds or until debris has stopped falling.

25. Appropriate action to be taken for an imminent nuclear attack with a 2 minute warning.

If time permits, your unit will be notified. However, if caught unprotected, take advantage of any protective shelter available. Move to a fighting hole or a protective shelter, staying low. Once in your fighting hole, lie on your back with your legs drawn up to your chest and remain in this position for 90 seconds following the blast or until the blast waves pass over and debris stops falling. Once the debris has stopped falling, cover the fighting hole with any material. This material will protect against possible fallout (example: poncho, liner, shelter half, or anything large enough to cover the hole).

Check yourself and others for injuries, brush any dust/dirt particles from yourself or buddy, check weapons and equipment for damage, and prepare to continue the mission.

26. Utilization of the M8 paper.

Remove and open M8 paper from M256 kit or mask carrier. Test the liquid (ensure M8 paper is held in down position to prevent liquid contamination from running onto protective

from running onto protective gloves. Blot, do not rub the M8 paper on suspected contamination). Compare any color changes by observing the colors shown on the inside cover of the book of M8 paper.

YELLOW/GOLD = G SERIES NERVE
DARK GREEN = V SERIES NERVE
PINK RED = H SERIES BLISTER

NOTE: Some G agents give a red-brown color which is between typical H and G color. Some decontaminants will give false reading, positive results must be confirmed by test with the sampler detector.

27. Utilization of the M9 paper.

The M9 paper is issued 1 roll per squad, worn around the ankles, wrist, and biceps on the exterior of protective clothing. M9 paper does not identify chemical agents, its purpose is to detect their presence. Open the M9 tape, unroll a small portion of detector tape. Blot, do not rub the M9 paper on suspected liquid. Observe for color change which can be light pink, reddish-brown or violet color.

28. Method of skin and personal equipment using a decon kit within 1 minute after discovering the presence of contamination.

Avoid further contamination and don your mask/hood, even if your face is contaminated. If your face is contaminated, do not fasten your hood. If your eyes are contaminated, flush immediately with water. Seek over head shelter or sue a poncho for protection. Follow the instructions on the M258A1 skin decon kit using pinch-blot method vice wiping the skin.

29. Method for decontamination of the face.

If the face is contaminated, decontaminate the face first, then the mask. Remove the helmet, hold your breath, close your eyes, and lift the hood and mask from your chin to expose the contaminated area. Scrub contaminated areas.

30. To properly use the M291 skin decon kit, read and follow the instructions on the package.

31. The Commanding Officer or his designated representative is duly authorized to sound the all clear following selective unmasking.

32. The following information is contained in the NBC-1 report:

Observers report of a NBC attack, sent with FLASH precedence; the who, what, where, when, and how the attack took place.